Efgust-27-12 10:39:05 AM

Packaging

	- · · · · · · · · · · · · · · · · · · ·							2		
Item ID: Revision ID:	D407-667-105		Accept	*N9000	4010	10* - 5	Setup Star	t *N	S1*	
	Crosstube Fwd						Stop	· *NI	S2*	
Start Date: -Required Date: Reference:	25/07/2012 Start Qty: 1.00 15/08/2012 Req'd Qty: 1.00	•		Cust Item ID: Customer:				14	• 17	
Approvals:	Process Plan: MUJ	Date: 12/08/	27 Tooling:	Date:] 	Run Star	I/I	R1*	
· .	QC:	Date:	2-1_Tooling: SPC (Y/N):	Date:	<i>,</i>		Stop	` *N	R2*	
Sequence ID/ Work Center II	Operation Description	ı	Set Up/ Run Hours	Tool ID 7	Fool # Pla	-	Reject Qty	Reject Number	Insp. Stamp	
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D407-667-145	Rev C (DEO)	•		DAS						
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Packaging	Memo		0.00			(<u> </u>	- 	

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Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS				
	•			-		Rework]		Skid-tube	Crosstube		Water Jet	Engineering			
Part f	NO.					Scrap	┨		Machining	Small Fab		d. Eng. Coor.	Quality			
NCR I	Vο					Use-as-is Work Order Update	┨	Inern	noforming Large Fab	Finishing Composite	- Rec/Sto	re/Packaging Supplier	Other			
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Root					Descri	ption of work order update	1	nitial	Ac	ction	Sign &					
Cause		Date	Step	Qty	1	or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector			
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Landi		1			_	General		le .		_	- 7	r				
	\vdash	Bending			<u> </u>	Bend	-	Grain		-	Ovalized	1	Pressure/Forced			
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}	\vdash	Cracks			<u> </u>	Broken/Damaged	\vdash		ion Incomplete	<u>, </u>	Part Incorre		Weld			
	-	Crushed/	Crimped.		-	Burrs	\vdash		ions Incomplete	/Unclear	Part Lost/M	- L	Wrong Stock Pulled			
	\vdash	Cuffs			Contamination	-	Mainte		<u> </u>	Part Moved						
	Heat Treat		<u> </u>	Countersink	\vdash	Mislabe		-	Positioned	Ĭ F	¬					
	Inspection Strip in Tube			Cut Too Short	-	Misread	t .	L	Power Loss,	/Surge	Other					
	Ripples in Bend Torque Waves in Extrusion			<u> </u>	Drill Holes	Offset										
	Н				ⁿ	Drawing	H		Calibration							
				Finish	Out of Sequence											
	Wave/Twist in Tube					Folio	1	Outside	Outside Dimensions							

August-27-12 10:39:05 AM Item ID: D407-667-105 Accept Setup Start *N900040100* **Revision ID:** Crosstube Fwd Item Name: 25/07/2012 **Start Date:** Start Qty: 1.00 **Cust Item ID: Required Date:** 15/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Process Plan: _____ Date:_____ Tooling: Approvals: Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Insp. Accept **Work Center ID** Description **Run Hours** Qty Qty Number Stamp Code 120 0.00 BENDING MACHINE - CROSSTUBES *120* CNC Bend 2 0.00 Memo Bend tube as per Dwg D407-667-145 using CNC bender program 407-fw CNC Alpha 160 Bender

130

QC15- Crosstube Dimensional Check

QC Quality Control

Memo

											DQA:	Dat	e:	,
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPDA ⁻	TE	·		_	3
											QA Closed:	Date	e:	, ,
Work Ord	er.			_		DISPOSITION				AGAINST DE	PARTMENT	PROCESS		
Part f	- No	-				Rework Skid-tube Crosstube Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite			Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other	
Root					Descri	ption of work order update		nitial	Action		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descripti	on	Date	Verification	\perp	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
						F	AUL	T CATE	GORY					·
Landi	ding Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube			-	o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread			Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Ripples in Bend					Drill Holes		Offset		<u> </u>		~ (

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Work Order ID 88091 August-27-12 10:39:05 AM

88091

Item ID: Revision ID: Item Name:	D407-667-10 Crosstube Fwe			Accept	*N900	040	100)*	Setup Sta	IV	S1*
Start Date: Required Date: Reference:	25/07/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	ID:				· "N	S2*
Approvals:	Process Pla	ın:	Date:			ate:		J	Run Sta Sto	D .	R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 Crosstubes Crosstubes		1- scrib batc. 2-Drill pilot 667-145. Dr towers, as pe 3-Drill and R DT8542 as p sides. 4-Flip tube a off existing P 5-Drill pilot Drill only the 6-Drill & rea as per Dag I 7-Drill Fwd red 145. Note: Fw 8-Drill Aft ri	rill all (3) top holes use or QSI0010. Ream all holes in tube to the Dwg D407-667-145 and switch drilling Jigs fit holes using T" pins. Holes using drill Jig DT8 at the top (2) holes to fit holes to fit holes using drill Jig wid side has 3x top holes.	Jig DT8541 & DT8542 as parill table in DT8577 hole in DT8577 hole in DT8577 hole in DT8542 as per Dwg nish size using drill Jig DT8541 & DT8542 as per Dwg nish size using drill Jig DT8545 as per Dwg DT8787FWD as per Dwg	T8541 & holes on all four t. Locate Jigs 407-667-145.	Haele	P		ç.		·

NCR:	Yes	/ No				WORK ORDER NON-	COL	NFORI	MANCE / UPI	DATE			•
											QA Closed:	Date:	, ,
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
	•					Rework]		Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
Part I	NO					Scrap Use-as-is	1		noforming	Finishing		e/Packaging	Other
NCR f	No. ِ		· · ·			Work Order Update]	l ~ 		Composite	1100,000	Supplier	
Root					Descri	ption of work order update	П	nitial	Act	tion	Sign &		
Cause	ļ	Date	Step	Qty	•	or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
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Landi	ng G	Gear			·	General							
	\sqcap	Bending				Bend		Grain			Ovalized		Pressure/Forced
	П	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	are		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.	-		Burrs		Instruc	tions Incomplete/I	Unclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs		Contamination		Mainte	enance		Part Moved		_		
	Heat Treat Countersink			Countersink		Mislab	eled		Positioned \	Wrong	_		
	Inspection Strip in Tube Cut Too Short			Cut Too Short		Misrea	d		Power Loss/	/Surge	Other		
	Ripples in Bend Drill Holes			Drill Holes	Offset								
		Torque V	Vaves in B	Extrusio	n	Drawing		Out of	Calibration				
	Turning Sequence					Finish		Out of	Sequence				

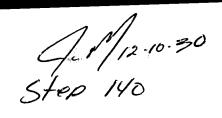
Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY:*****
1- Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill all (3) top holes. Holes facing inboard.
***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY:*****
2- Drill Fwd rivet holes using drill Jig DT8787 fwd as per Dwg D407-667-145.
Note: Fwd side has 3x top holes.Facing inboard.
3- C'sink holes as per Dwg D407-667-145. Allow rivet to sit below surface to compensate for paint.
4- Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins .Drill ONLY 2 top holes ONLY plug most bottom holes to prevent accidental drilling. Drill holes and ream using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill only the top (2) holes.
***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5- Drill Aft rivet holes using drill Jig DT8787 aft as per Dwg D407-667-145.
***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6- C'sink holes as per Dwg D407-667-145. Allow rivet to sit below surface to compensate for paint.

7- Scribe part # and batch # using vibrating stylus as per Dwg D407-667-145

Inside of Cuff (Do not engrave on outside of tube)

8- *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145

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Hand Finishing Crosstubes

Page 4

August-27-12 10:39:05 AM Item ID: D407-667-105 Accept *N900040100* Setup Start Revision ID: Item Name: Crosstube Fwd Start Date: 25/07/2012 Start Qty: 1.00 **Cust Item ID:** Required Date: 15/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Process Plan: _____ Date: ____ Tooling: Approvals: Date: ____ Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description Qty Qty Stamp **Run Hours** Code Number 10 -*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145 150 OC5- Inspect part completeness to step on W/O QC Memo Quality Control *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** 0.00 *160* HandFXtube 0.00

1-CLEAN CROSSTUBE WITH WASH'N WIPE

*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***

Memo

											DQA:	Date	: <u> </u>
NCR:	Yes	/ No		-		WORK ORDER NON-O	100	NFOR!	ANCE / UPDAT	Έ			
		,							•		QA Closed:	Date	· ·
Work Orde	۵r'					DISPOSITION			A	AGAINST DEF	PARTMENT	/PROCESS	
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Part I	۷o.					Scrap]	ſ	Machining S	mall Fab	Quality		
						Use-as-is			~ —	Finishing	Rec/Sto	Other	
NCR 1	۷o.					Work Order Update	_		Large Fab Co	mposite		Supplier	
Root					Descri	ption of work order update	П	Initial	Action		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Description	on	Date	Verification	QC Inspector
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		Bending				Bend		Grain			Ovalized	L	Pressure/Forced
	Centre Not Concentric to O/S)/S	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct _	Weld
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete/Uncle	ear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs					Contamination		Mainte	nance		Part Moved	•	
	Heat Treat					Countersink		Mislabe	led		Positioned \	Wrong	_
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	I		Power Loss,	[/] Surge	Other
	Ripples in Bend .					Drill Holes	Г	Offset			=		

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio August-27-12 10:39:05 AM

Item ID:

D407-667-105

Accept

N900040100

Setup Start

Revision ID:

Start Date:

Item Name: Crosstube Fwd

Required Date: 15/08/2012

25/07/2012

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

QC:

Date: _____ Tooling:

Date:

Run

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID

Description 180

Outsource process - NDT per QSI038 4.1

Set Up/ **Run Hours** Tool ID

Tool # Plan Code

Accept Qty

Reject Qty

Reject Insp.

1/12-14-01

Number Stamp

120

Outsource2

Memo

Start Qty: 1.00

Rea'd Otv: 1.00

Operation

0.00

0.00

0.00

0.00

Outsource process - NDT

*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***

OUTSIDE SERVICE -CROSSTUBES

Liquid Penetrant Inspection as per QSI 038 Or Issue P/O: 15302 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order

190

1QN

Packaging

Packaging

Packaging

Memo

*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Inspect for transit damage

Memo

Ensure copy of NDT results attached to work order.

200

200 QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***

Inspect for damage & ensure results are as per Dwg D206-667-145

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NCR: Y	'es / N	lo			WORK ORDER NON-	COI	NFORM	/ANCE / UPI	DATE	·		•		
										QA Closed:	Date:	, ,		
Work Orde	or.		•		DISPOSITION				AGAINST D	EPARTMENT	PROCESS			
Work Orac		-			Rework	٦		Skid-tube	Crosstube	7	Water Jet	Engineering		
Part N	lo.				Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
					Use-as-is	1	ŧ	noforming	Finishing	ng Rec/Store/Packaging Other				
NCR N	۱o.				Work Order Update			Large Fab	Composite		Supplier			
										_				
Root					iption of work order update Initial Action				Sign &					
Cause	Da	e Step	Qty		or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector		
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Material														
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Other	_													
Process														
Supplier														
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Unapproved		<u> </u>	<u> </u>	<u> </u>								<u> </u>		
						AUL	T CATE	GORY		···				
Landi	ng Gear			 	General		1		_	-	_	-		
	Bend	_			Bend	-	Grain			Ovalized		Pressure/Forced		
	Centre Not Concentric to O/S BOM/Route					-	Hardwa		-	Over/Under	}	Temperature/Cure		
	Cracks Broken/Damaged			⊣		1 '	on Incomplete		Part Incorre	⊢	Weld			
	Crushed/Crimped Burrs				 	4	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled			
	Cuffs Contamination			-	<u> </u>	Mainte		<u> </u>	Part Moved					
	Heat Treat Countersink			<u> </u>	Mislabeled			Positioned \						
		ction Strip i	n Tube	<u>_</u>	Cut Too Short	Misread Power Loss/Surge Other					Other			
		es in Bend		- L	Drill Holes	Offset								
	Torq	ie Waves in	Extrusio	n	Drawing	-	Out of (Calibration						

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Page 6

August-27-12 10:39:05 AM Item ID: D407-667-105 Accept *N900040100* Setup Start Revision ID: Item Name: Crosstube Fwd Start Date: Start Qty: 1.00 25/07/2012 **Cust Item ID: Required Date:** 15/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Approvals: Process Plan: ____ Date: Tooling: Date: Stop Date: **SPC (Y/N):** Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID Description Qty **Run Hours** Code Qty Stamp Number 204 0.00 *204* HandFXtube 0.00 Memo Hand Finishing Crosstubes *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** 1- PRESSURE WASH AND THEN USE WASH'N WIPE TO CLEAN CROSSTUBE BEFORE CHEMICAL CONVERSION 206 QC7-Inspect Chemical Conversion Coat 0.00

Memo

0.00

Quality Control

*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***

12-11-3

											DQA:	Date	: <u></u>
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE				*
		·				<u> </u>					QA Closed:	Date	
Work Ord	or.					DISPOSITION			AGAI	NST DE	PARTMENT	/PROCESS	
Part I	No.					Rework Scrap Use-as-is Work Order Update		f Therm	Skid-tube Crosst Machining Small noforming Finish Large Fab Compo	Fab ning		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	otion of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Tfaining Unapproved													
							AUI	LT CATE	GORY				-
Land		Bending Centre Not Concentric to O/S Cracks ' Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube)/S	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		-1	on Incomplete ions Incomplete/Unclear enance eled		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	1 1	Ripples in	Bend			Drill Holes	1	Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

August-27-12 10:39:05 AM

Item ID: Revision ID:	D407-667-10	05		Accept	*N900	040	100	ገ* s	etup Star	¹ *N	S1*
Item Name:	Crosstube Fwo	d							Sto	p *	S2*
Start Date:	25/07/2012	Start Qty: 1.00	*1*		Cust Item	ID:					. ,,
Required Date:	15/08/2012	Req'd Qty: 1.00	*1*		Customer:						
Reference:			•								
Approvals:	Process Pla	ın:	Date:	Tooling:	D	ate:	· · · · · · · · · · · · · · · · · · ·	R	lun Stai	17	R1*
	QC:		Date:	SPC (Y/N):	Date:				Sto	*N	R2*
Sequence ID/ Work Center II		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210		SprayPaint		0.00							•
210 SprayPaint		Memo		0.00				(Ø	Ø	Ad
Spray Painting			LATEX GLOVES WE	IEN HANDLING CROSSTUBE*	**						12-11-3
		1-Prime insi	de and outside crosstul	be as per QSI 005 4.2							
		2-Paint outs	ide crosstube with Whi	ite Imron as per QSI 005 4.2							
		PRIME: \S									
		Start Time:									
		PAINT: \ 3 Start Time:_ Finish Time	3:00								
220		QC14- Inspect Spray Pai	nt	0.00				DAS			
220								211	1'	2-11-3	
QC		Memo		0.00				— 83 —		~ ·	
Quality Control		. Then, Wrap i	in plastic bag to protect	t from scratches							

NCR:	⁄es	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPI	DATE			•
											QA Closed:	Date	:
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	
Part N	_					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	No					Use-as-is Work Order Update		Thern	noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Descri	ption of work order update		nitial	Act	ion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data													
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Supplier	Н												
Training	H												
Unapproved	LL.		<u> </u>				- 0 - 1 - 1	T CATE	CORY			<u> </u>	
[and:					<u>.</u>	General	-AUL	ICATE	GURY				
Landi	_	ear Bending				Bend		Grain			Ovalized	Г	Pressure/Forced
	-	_	ot Canca	ntric to 1		BOM/Route	-	Hardwa	uro.	 	Over/Under	tolerance	Temperature/Cure
	Centre Not Concentric to O/S				^{5/3} -	Broken/Damaged	-	1	ion Incomplete	-	Part Incorre	⊢	Weld
	Crushed/Crimped					Burrs	\vdash	1	tions Incomplete/	Unclear	Part Lost/M	<u></u>	Wrong Stock Pulled
	Crushed/Crimped.				-	Contamination	\vdash	Mainte	•	-	Part Moved		
	Heat Treat					Countersink	\vdash	Mislabe			Positioned V	Vrong	
	Inspection Strip in Tube					Cut Too Short	\vdash	Misread		<u> </u> -	Power Loss/		Other
	—	Ripples in			-	Drill Holes		Offset	-	<u> </u>	١٠٠٥، ١٥٥٥/		
	Torque Waves in Extrusion					Drawing		4	Calibration				
	—	Turning S				Finish		-{	Sequence				

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

August-27-12 10:39:05 AM

Item ID: Revision ID: Item Name:	D407-667-10 Crosstube Fwo			Accept	*N900	040	100)* s	Setup Sta	i VI	S1* S2*
Start Date: Required Date: Reference:	25/07/2012 : 15/08/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item Customer:	ID:				I	5 /
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		ate:	- 	F	Run Sta Sto	" [\]	R1* R2*
Sequence ID/ Work Center II 230	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 Grosstubes Crosstubes			nating surfaces of support ea with 4105S wash 'n' w	0.00 and crosstube with 400 gri	it sandpaper,				Ø	_ Ø	12-11-4
· · · · · · · · · · · · · · · · · · ·		A/R Pro		er DSI9565 and QSI 015							
	,	4-Install nut paint.	t plates as per Dwg D407	-667-145. Touch-up rivet	heads with Imron						
240 *940* 0C		QC5- Inspect part compl	leteness to step on W/O	0.00)As 11	1	2-11-4	
QC Quality Control		Memo		0.00						<i></i>	

NCR: Y	es ,	/ No				WORK ORDER NON-O	O	NFORN	ANCE / UP	DATE				*
											QA Closed:	Da	te:	· ·
Manda Onda						DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS		
Work Orde	er: —					Rework	1		Skid-tube	Crosstube	7	Water Jet		Engineering
Part N	۷o.					Scrap	1 1	i	Machining	Small Fab	Pro	d. Eng. Coor.		Quality
	_					Use-as-is	1		noforming	Finishing	- i	re/Packaging		Other
NCR N	No					Work Order Update			Large Fab	Composite]	Supplier	_	
_ :			· · · · · · · · · · · · · · · · · · ·	1	D				Λ	tion	Cian 9			
Root		D-4-	Chan	Q4.		ption of work order update	i i	nitial iief Eng		ription	Sign & Date	 Verificatio	_	QC Inspector
Cause		Date	Step	Qty		or Non-conformance	Cn	ilet Etig	Desc	приоп	Date	vermeatio	'' -	QC IIIspector
Doc/Data	\dashv													
Equip/Tooling	\dashv													
Operator	\dashv							:						
Material	\dashv]		
Setup	H						l		•				1	
Other	\dashv						ļ							
Process	Н						Ì							
Supplier	Н													
Training	H													
Unapproved	LL.			<u> </u>			AUI	T CATE	GORY			<u> </u>		
Landi	ng Ge	ear				General								
		Bending				Bend		Grain			Ovalized			Pressure/Forced
	$\boldsymbol{\vdash}$	Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance		Temperature/Cure
	-	Cracks				Broken/Damaged	\vdash	Inspecti	on Incomplete		Part Incorre		\prod_{i}	Weld
	\vdash	Crushed/	Crimped.			Burrs		4 '	ions Incomplete/	Unclear	Part Lost/M	issing	П	Wrong Stock Pulled
		uffs .	•			Contamination		Mainte	•		Part Moved			
ъ	_	leat Trea	it			Countersink	\vdash	Mislabe			Positioned	V rong		
	\vdash	nspectio		Tube		Cut Too Short		Misread	ł	<u> </u>	Power Loss,			Other
						Drill Holes		Offset		_		-	-	
	Ripples in Bend Torque Waves in Extrusion				n	Drawing		Out of (Calibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Packaging

August-27-12 1	0:39:05 AM									
Item ID: Revision ID:	D407-667-10	05		Accept	*N900040	1100	*	Setup Start	*NS	S1 *
Item Name:	Crosstube Fwo	i						Stop	*N.	S 2*
Start Date:	25/07/2012	Start Qty: 1.00	*1*		Cust Item ID:					
Required Date:	: 15/08/2012	Req'd Qty: 1.00	*1*		Customer:					
Reference:			•							
Approvals:	Process Pla	n:	Date:	Tooling:	Date:			Run Start	171	₹1*
	QC:		Date:	SPC (Y/N):	Date:			Stop	*NI	₹2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID Tool #		Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250		Pick Kit		0.00				- •		
250 Packaging		Memo		0.00		-	/			52 /
Packaging										12-11-6
.260		QC4- 100% Inspect kits	for completeness	0.00						
260		Memo		0.00 D 11 O	∛ 7	_		<u> </u>		
Quality Control					J					
270				0.00						1 -
*270 *270*		Packaging		0.00					الدا	70) 8
Packaging		Memo		0.00					AHI	17 X

Identify and pack for shipping as per PPP D407-667-105
Location: ______
PPP Rev: ______

NCR: Y	/es / 1	No			WORK ORDER NON-O	CONI	FORN	MANCE / UPI	DATE			•
										QA Closed:	Date:	
Work Orde	er:				DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
					Rework	7 📗		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	No				Scrap			Machining	Small Fab	-{	d. Eng. Coor.	Quality
					Use-as-is	-		noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	No				Work Order Update	[」] ┃		Large Fab	Composite]	Supplier	
Root				Descri	ption of work order update	In	itial	Act	tion	Sign &		
Cause	Da	te Step	Qty		or Non-conformance	Chie	ef Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	Ш	;										
Equip/Tooling												
Operator						1						
Material												
Setup								į.				
Other												
Process												
Supplier										İ		
Training	H											
Unapproved			1			ALUT	CATE	L GORY		<u>.</u>	<u> </u>	<u>.i</u>
Landi	ng Gear	 			General	AULI	CAIL	OOKI			· · · · · · · · · · · · · · · · · · ·	
Land	Bend	ling			Bend	\Box	Grain		Г	Ovalized	Г	Pressure/Forced
	⊢	re Not Conce	entric to	o/s	BOM/Route	-	tardwa	ıre		Over/Under	tolerance	Temperature/Cure
	\vdash			"	Broken/Damaged	\vdash		ion Incomplete		Part Incorre	}	Weld
	Cracks Crushed/Crimped.				Burrs	\vdash		ions Incomplete/	Unclear	Part Lost/M	 	Wrong Stock Pulled
	Cuffs .				Contamination			enance		Part Moved		
*	Heat Treat				Countersink		Mislabe	eled		Positioned \	Vrong	
	Inspection Strip in Tube				Cut Too Short		Misread	j		Power Loss/	Surge	Other
	Ripples in Bend				Drill Holes	П	Offset		,			
	Torque Waves in Extrusion				Drawing		Out of 0	Calibration				
	Torque Waves in Extrusion Turning Sequence				Finish		Out of S	Sequence				

Outside Dimensions

Date:

DQA:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

August-27-12 10:39:05 AM

Item ID: D407-667-105 Accept *N900040100* Setup Start Revision ID: Item Name: Crosstube Fwd *1* Start Date: 25/07/2012 Start Qty: 1.00 **Cust Item ID: Required Date:** 15/08/2012 Req'd Qty: 1.00 *1* **Customer:** Reference: Run Start Process Plan: Date: Approvals: Tooling: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Tool # Plan Reject Set Up/ **Tool ID** Reject Accept Insp. **Work Center ID Description Run Hours** Code Qty Qty Number Stamp 280 QC21- Final Inspection - Work Order Release 0.00 *280* 0.00 Memo Quality Control

NCR: Y	es / N	0			WORK ORDER NON-O	CON	IFOR	MANCE / UP	DATE			•
	,									QA Closed:	Date:	
Work Orde	er:				DISPOSITION			[]	_	EPARTMENT,		
Part N	•		· · · · · · · · ·		Rework Scrap Use-as-is			Skid-tube Machining noforming	Crosstube Small Fab Finishing	- 4	Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	lo	·			Work Order Update			Large Fab	Composite	ل	Supplier	
Root					ption of work order update	1	nitial	1	tion	Sign &	•	
Cause	Dat	e Step	Qty		or Non-conformance	Chi	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data					•							
Equip/Tooling	_	ļ										
Operator												
Material	_		1									
Setup												
Other		İ										
Process			-									
Supplier		İ	1									
Training												
Unapproved				<u> </u>	***							
						AUL	T CATE	GORY				
Landir	ng Gear			_	General					 -		7
	Bend	_			Bend	\vdash	Grain		_	Ovalized	<u> </u>	Pressure/Forced
	Centr	e Not Conc	entric to	O/S	BOM/Route	\vdash	Hardwa	•	_	Over/Under	<u> </u>	Temperature/Cure
	Crack	5			Broken/Damaged	Ш	Inspect	ion Incomplete	_	Part Incorre	⊢	Weld
Crushed/Crimped.					Burrs		1	tions Incomplete/	'Unclear	Part Lost/M	issing .	Wrong Stock Pulled
Cuffs					Contamination			enance		Part Moved		
Heat Treat					Countersink		Mislabe	eled		Positioned V	·	7
	Inspe	ction Strip i	n Tube		Cut Too Short		Misrea	d ,	1	Power Loss/	Surge	Other
Ripples in Bend D					Drill Holes		Offset			-		
	Torqu	e Waves in	Extrusio	n	Drawing		Out of	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Picklist Print

August-27-12 10:39:09 AM

Work Order ID: 88091

D407-667-105

Parent Item Name: Crosstube Fwd

88091

D407-667-105

Start Date: 25/07/2012

Required Date: 15/08/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

Pärent Item:

IPP Rev:F 05.09.01Add holes for compatibility with Bell SkidtubesKJ/JLM

IPP Rev:G 08-05-16 chg QC6 to QC15 DD verified by:EC

IPP Rev:H 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC IPP Rev:J 08-07-28 update as per (par 08-013) DD verified by:EC

IPP Rev K 09.01.06 ECN 08-562 EC verified by:DD IPP REV:L 11.08.05 PER ECN 11-615 DD VERF:EC IPP REV:M 12.08.20

DSI9628 revA (ECN12-631) DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
0407-667-105TRN		Manufactured	No	B8947	1	110	Each	0.0000	1	1 -	π.\	~ 12	~7 .
D407-667	7-105TF	N		D0741	7		•		**		W	Z-10	-29
rosstube Turning Detail 02873-043		Manufactured	No			230	Each	48.0000	2	2			•
102873-04 Fut Plate Assembly	13*	Manaracturea				250	Buen	10.0000	**		A	12-11	-4
	•			Location		Loc 4	Oty ,	Loc Code					
				LG052			48				_		4
					2644 .		2			=11	_		
ž.					2949 4386		6 40		_	<u>a</u>	_		
2873-045		Manufactured	No			230	Each	1.0000	2	2			
M2873-04	15*			*,					**	_	A	8 12-11	-4
t Plate Assembly				Location 8	39253	Loc (Otv	Loc Code		3		•	·
				LG052		100	1	<u> 200 Couc</u>					
~-					2947		1		<u> </u>		- -		

										DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-O	CON	NFORM	MANCE / UPDATE				•
										QA Closed:	Date:	
\\\\. O\ -					DISPOSITION			AGAINST	DE	PARTMENT/	PROCESS	
Work Orde	er:				Rework	٦		Skid-tube Crosstube			Water Jet	Engineering
Part N	lo.				Scrap	1		Machining Small Fab	_	Proc	d. Eng. Coor.	Quality
raici	···				Use-as-is	┪┃		noforming Finishing	_		e/Packaging	Other
NCR N	lo			<u> </u>	Work Order Update]		Large Fab Composite	·——		Supplier	
Root				Descri	ption of work order update		nitial	Action		Sign &	*****	
Cause	Date	Step	Qty	1	or Non-conformance		ief Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling		1										
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved				<u> </u>		<u> </u>						
						AUL	T CATE	GORY				
Landir	ng Gear			г	General ¬₋ .		۱			1	Г	7- /-
	Bending				Bend	\vdash	Grain		\vdash	Ovalized		Pressure/Forced
		Not Conce	ntric to	o/s	BOM/Route	\vdash	Hardwa		-	Over/Under	├	Temperature/Cure
	Cracks			<u> </u>	Broken/Damaged	\vdash	1	ion Incomplete	\vdash	Part Incorred	 	Weld
	_	l/Crimped		、	Burrs	-	4	tions Incomplete/Unclear	\vdash	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs			`	Contamination	-	Mainte	* a	-	Part Moved		
1	Heat Tr	eat			Countersink	1	Mislabe	eled	ı	Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish Folio August-27-12 10:39:09 AM

Work Order ID: 88091 *88091* Parent Item: D407-667-105 *D407-667-105* Parent Item Name: Crosstube Fwd **Required Date: 15/08/2012** Start Date: 25/07/2012 Required Qty: 1.00 Start Qty: 1.00 D2891-1 230 Manufactured Each 13.0000 *D2891-1* ** 12-11-4 (3) 2.25 Support 88892 Location Loc Qty Loc Code LG051 11 84164 11 LG052 72822 75176 D3595-063-395 230 Manufactured Each 112.0000 ** RUBBER CUSHION Location Loc Qty Loc Code LG051 112 2 82223 110 MS20601-AD4W10 Purchased No 230 Each 234.0000 *MS20601-AD4W10* ** Al 12-11-4 Location Loc Qty Loc Code LG050 233 120676 3 121690 100 100 T25125 30 LG051 118675

NCR:	Yes ,	/ No				WORK ORDER NON-	COI	NFORM	AANCE / UP	DATE	•		•
											QA Closed:	Date:	
Work Ord	or:					DISPOSITION				AGAINST D	EPARTMENT	PROCESS	
WORK Ord	er. –					Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Part f	Vo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is			noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR I	No					Work Order Update	ال		Large Fab	Composite		Supplier	
Root					Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	Ц												
Equip/Tooling	Ш												
Operator	\square												
Material	Н												
Setup	Н		•										
Other	\vdash												
Process	\vdash						ŀ						
Supplier	H												
Training Unapproved	H												
Oliappioved	1 1.		L	<u> </u>			FAUI	T CATE	GORY			<u> </u>	<u> </u>
Landi	ng Ge	ear				General							
		Bending				Bend		Grain		Γ	Ovalized		Pressure/Forced
	\vdash		ot Conce	ntric to (o/s	BOM/Route		Hardwa	re	<u></u>	Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
Crushed/Crimped.						Burrs		Instruct	ions Incomplete/	'Unclear	Part Lost/M	issing	Wrong Stock Pulled
Cuffs						Contamination		Mainte	nance		Part Moved	<u> </u>	
:		leat Trea	ıt			Countersink		Mislabe	eled	Ī	Positioned \	Vrong	_
		nspectio	n Strip in	Tube		Cut Too Short		Misread	i		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes		Offset		_			
	[]т	orque W	aves in E	xtrusion	1	Drawing		Out of 0	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish

Picklist Print
August-27-12 10:39:09 AM

Work Order ID: 88091		*88	8091*						
Parent Item: D407-667-105			407-667-1	05 *					
Parent Item Name: Crosstube Fwd		. ,		() ()			art Date: 25 tart Qty: 1.0		Required Date: 15/08/2012 Required Qty: 1.00
M\$21920-20	Purchased	No		230	Each	127.0000	4	4	
MS21920-20							**	_	Af 12-11-4
Clamp (per MIL-DTL-8783C)			123346	•				Θ	
			Location .	<u>Lo</u>	e Qty	Loc Code			
			LG050		127				-
northern Marie			116799		8				_
			120676		8				-
			121067		2				-
			121274 122254		2 57				· ^
			122518		50				
AÑ5-10A	Purchased	No	122310	250	Each	397.0000	10	10	
	1 di chascu	1.0		200	Lucii	377.0000	**		2020000
ANS_110/A Bolt							**	///	123533 80
역 (경기) 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			Location	Lo	e Qty	Loc Code			_
원 (취) 19 (秦) <u></u> /			ST337		297		_		_
5m2			118191		80				_
			121243		100				-
보다 중요. 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는			122151		117				· •
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100 000 000 000 000 000 000 000 000 000			122800		100				- 1
AN5-30A	Purchased	No		250	Each	105.0000	4	4	
AN !5-3'0'A' BOLT							**	80	12-11-6.
<u>,</u>			Location	<u>Lo</u>	e Qty	Loc Code			
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with the second second			122416		50				-
· 경도 - 현원·			ST339		55		-		_
· · · · · · · · · · · · · · · · · · ·			117514.		7				_
rigg The state of the		122141		48			4 x	-	
			•					1	

											DQA:	Date	::	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPDATE					,
											QA Closed:	Date	· ·	<u>·</u>
Work Ord	er.					DISPOSITION			A	GAINST DEF	PARTMENT	PROCESS		
Part I	No.					Rework Scrap Use-as-is Work Order Update		f Therm	Machining Sn noforming Fi	osstube nall Fab nishing mposite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other	
Root						ption of work order update	1	nitial	Action		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Description	n	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
							AUL	T CATE	GORY					
Landi		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio	Crimped it n Strip in		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete/Unclea nance iled	ar	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulle	
1	1	Ripples in	Bend		İ	Drill Holes	1	Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

August-27-12 10:39:09 AM

Work Order ID: 88091

Parent Item:

D407-667-105

Parent Item Name: Crosstube Fwd

88091

D407-667-105

Start Date: 25/07/2012

Required Date: 15/08/2012

Start Qty: 1.00 4

Required Qty: 1.00

AN5-32A

AN960JD516

NAS1149D0563J Purchased

No

No

Location Loc Qty Loc Code ST337 100 122416 50 122800 50 ST339 101 120423 122151 96 ST340 100 121541 100 250 Each

250

Each

2.0000

301.0000

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MS21042L5

Nut

Purchased

Purchased

No

Location Loc Qty Loc Code ST338 1069059 2

250

Each

1,596.000

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Location Loc Oty Loc Code 300 488 121652 488 314 1000 122452 1000 ST300 108 108827 116105 116548 43 119109 48 2937 12

NCR:	⁄es	/ No				WORK ORDER NON-O		NFORM	MANCE / UPI	DATE			, ,
											QA Closed:	Date:	
Work Orde	er: _					DISPOSITION	,		ci.,	AGAINST DE	PARTMENT/		1
Part N	-					Rework Scrap Use-as-is		Ì	Skid-tube Machining noforming	Crosstube Small Fab Finishing	1	Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR I	No. ـ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Work Order Update]		Large Fab	Composite		Supplier	
Root						ption of work order update	i	nitial	Act		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data							1						
Equip/Tooling	\dashv												
Operator Material	\dashv												
Setup	\dashv		ĺ										
Other							l						
Process													
Supplier	П												
Training							i						
Unapproved	П												
						F	AUL	T CATE	GORY				
Landi	ng G	ear				General					_		_
		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	are		Over/Under	tolerance	Temperature/Cure
	Cracks					Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld
	Crushed/Crimped					Burrs		1	tions Incomplete/l	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs					Contamination		Mainte		_	Part Moved		
	Heat Treat					Countersink	_	Mislabe		<u> </u>	Positioned V		7
						Cut Too Short	_	Misread	d		Power Loss/	Surge	Other
	Ш	Ripples in				Drill Holes	\vdash	Offset					
		Torque W			n	Drawing	_	4	Calibration				
		Turning S	equence			Finish		Out of !	Sequence				

Outside Dimensions

DQA:

Date:

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Wave/Twist in Tube

DART AEROSPACE LTD	Work Order:	88091
Description: Crosstube High Fwd (407)	Part Number:	D407-667-105
Inspection Dwg: D407-667-145 Rev: DC 2/10/2		Page 1 of 1

Required Dimension Min Max Height 1/2 Span 23.41 23.67 45.81 46.07 Angle 54 56 Total Span 91.63 92.13 Bending Passes Crushing 6 6%

Crushing			
0,193 = 3,979		, 228 <u>+</u> 3.944 5.7%	
4.8/		`S.77.	
7.0%		261	
1// 1863	İ	2.656	
\ \\\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	j	1.858	
2553	i	• • • • • • • • • • • • • • • • • • • •	<i>L</i> ₁
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45,900	11	49.810 B	
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	91,710" -		
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		Side A		Side B						
Bending Pass	es	17		135						
Crushing		4.8%		5.7%						
Comments										
Sine 1 =	4.8%.	crashy	Q	17 PASSES						
Sine BZ	5.77.	crushi	<u></u>	15 PAUX						

QC15 Inspection	DAG/	_
Date	11 / 17/4 20	

Rev	Date	Change	Revised by	Approved
Α	07.02.06	New Issue	KJ/JM	<u> </u>
В	09.11.12	Dimensions updated per Dwg Rev C	KJ (A	İ
С	12.04.16	Added bending, crushing dimensions	KJ ON	IN)

											DQA:	Da	te:	
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WOIK OIU	=1.				Rework	1		Skid-tube	Crosstube	٦		Water Jet		Engineering
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	Inspec	tion Strip ir	1 Tube		Cut Too Short		Misread	t			Power Loss/	'Surge	L	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. D AND EARLIER AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 3 AND EARLIER

REF: CANADIAN STC: SH01-5 REF: FAA STC: SR01304NY REF: EASA STC: EASA.IM.R.S.01179

PURPOSE:

The purpose of this service instruction is to permanently add the D206-667-017 Kit to the DXXX-667-101/-103/-105/-107 Crosstube kits.

INSTRUCTIONS:

DXXX-667-101/-103/-105/-107 Crosstubes at CHG 005/006/005/003 (respectively) and later are supplied with the D206-667-017 Grounding Strap Kit installed per section 3.2 of IIN-D206-667 Rev. D.

WEIGHT AND BALANCE

There is a negligible weight change associated with the installation of this kit.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION **BRANCH** DAO # 01-O-01

APPROVED

D. SHEPHERD (DE # 02)

CERT. NO .: ISSUE NO .:

SH01-5

Α	NEW IS	SUE (REF CIF	t 12-3)	AJS	11.08.02				
REV.			DESCRIPTION	BY	DATE				
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CHECK	KED	上	DRAWING NO.		REV. A				
MFG. A	PPR.	N/A	DSI 9628	'	SHEET 1 OF 1				
APPRO	VED	M	TITLE	•	SCALE				
DE API	PR.	#	GROUNDING STRAF	PINSTALLA	ATION NTS				
DATE	12.0	8.02	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR OPPEOU OR COMMUNICATED TO ANY OTHER PERSON WITHOUT						

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE														
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Outside Dimensions

DQA:

Date:

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Wave/Twist in Tube

DART SERVICE INSTRUCTION

TO AMEND INSTRUCTIONS FOR CONTINUOUS AIRWORTHINESS ICA-D206-667 Rev. 3 OR LATER

REF. CANADIAN STC: SH01-5 REF. FAA STC: SR01304NY REF. EASA STC: EASA.IM.R.S.01179

PURPOSE:

The supports on the following crosstubes are now installed using Proseal instead of Magnobond:

D206-667-101 @ CHG 004 D206-667-103 @ CHG 005 D206-667-107 @ CHG 002 D206-667-201 @ CHG 004 D206-667-203 @ CHG 004 D206-667-207 @ CHG 002 D407-667-105 @ CHG 004

CHANGE:

For the crosstubes listed above, section 32.4 of ICA-D206-667 is amended as follows. Use Figures 32-4 to 32-8 of ICA-D206-667 for further reference. For crosstubes of an earlier change number, it is recommended that if the supports are removed, the supports should be reinstalled using the procedure listed below.

32.4 SUPPORT INSTALLATION

- 32.4.1 Locate the area on crosstube for installation of support (ref. Figures 32-4 to 32-8 of ICA-D206-667). For D206-667-101/-103/-107/-201 and D407-667-105 crosstubes, the outward face of the support tabs should be 13.08" (332mm) from the crosstube center. For D206-667-203/-207 crosstubes, the outward face of the support tabs should be 10.03" (255mm) from the crosstube center. Ensure paint finish of crosstube is intact; touch up as required per Chapter 5 (5.3.9) of ICA-D206-667.
- 32.4.2 If present, remove any paint/primer on bottom of supports. Abrade mating surfaces of support and crosstube with 400-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.3 Ensure a layer of 3M Scotch-Weld 2216 B/A Epoxy Adhesive is on the bottom of the support. If required, either apply or touch-up support to have a 0.03" to 0.05" thick layer of adhesive over the entire mating surface. Allow supports to cure for 24 hours.
- 32.4.4 Abrade mating surfaces of support (after cure) and crosstube with 180-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.5 Apply a 0.04" to 0.07" thick layer of Proseal 890 Class B or AMS-S-8802 Class B sealant underneath applicable support and install support.
- 32.4.6 Install the clamps opposite to crosstube support as shown in Figures 32-4 to 32-8 of ICA-D206-667. Install rubber cushions underneath each clamp around the bottom circumference of the crosstube up to the crosstube centerline. Torque clamps 80-100 in lb (9.0-11.3 Nm). It is acceptable to use smaller or larger sized MS21920-XX clamps than those listed in ICA-D206-667, ensure that after torquing the clamps per this instruction, the nuts are in safety but not bottomed out
- 32.4.7 Prior to installing crosstube on aircraft, allow supports to cure for 72 hours and recheck torque on clamps.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-0-01

APPROVED

BY:
D. SHEPHERD (DE # 02)

DATE:
11.07.20
CERT. NO.:
SH01-5
ISSUE NO.:
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DATE	11.0	7.15	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE BURKESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATION TO ANY OTHER PERSON WITHOUT WHATTEN PERMISSION FROM DART AEROSPACE LTD.							

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Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

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Item	Qty -145	Part Number	Description
1	Х	D407-667-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
2	1	D6010-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

D

С

В

- 1) MATERIAL: MANUFACTURED FROM D60 10-115 FINISHED LENGTH = 113.20±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-145" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: 17.8 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE.
- RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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ENGINEERING

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SUBJECT TO AMENDMENT

WITHOUT NOTE F

WORK ORDER MLJ NO. 88031 MLJ 12/07/25

DEO ATTACHED

EW#11-617

С	REORG TO CUP D3595-(REMOV D2-3); F	ANIZED VIEW RRENT STAN 163-395 WAS IED REF. 7 AI RELOCATED I TURNING D	IOTES/PART LIST (ZN D7-1); NS AND REFORMATTED DRAWING DARDS. D2856-400-694 (ZN D6-2 & A5-2); D0 TOLERANCES (ZN C6-3, C4-3, FLAG #6 (ZN A8-3) PER NCR 210; ETAIL & UPDATED TOLERANCE TO	RF	08.11.06				
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APPRO\	VED	TIL	TITLE		SCALE				
DE APPI	R.	#	CROSSTUBE ASS'Y (407 HIGH FWD) NTS						
DATE	NR 1	1.06	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND COMPRESSION, AND IS SUPPLIED ON THE DUPLES CONCITION THAT IT IS						

08.11.06

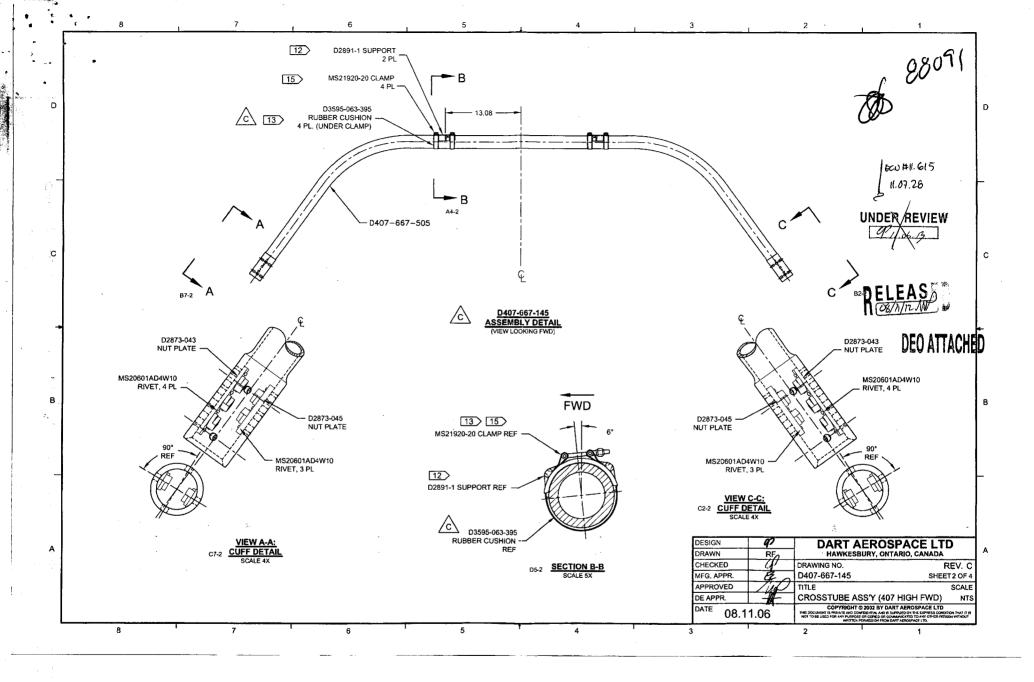
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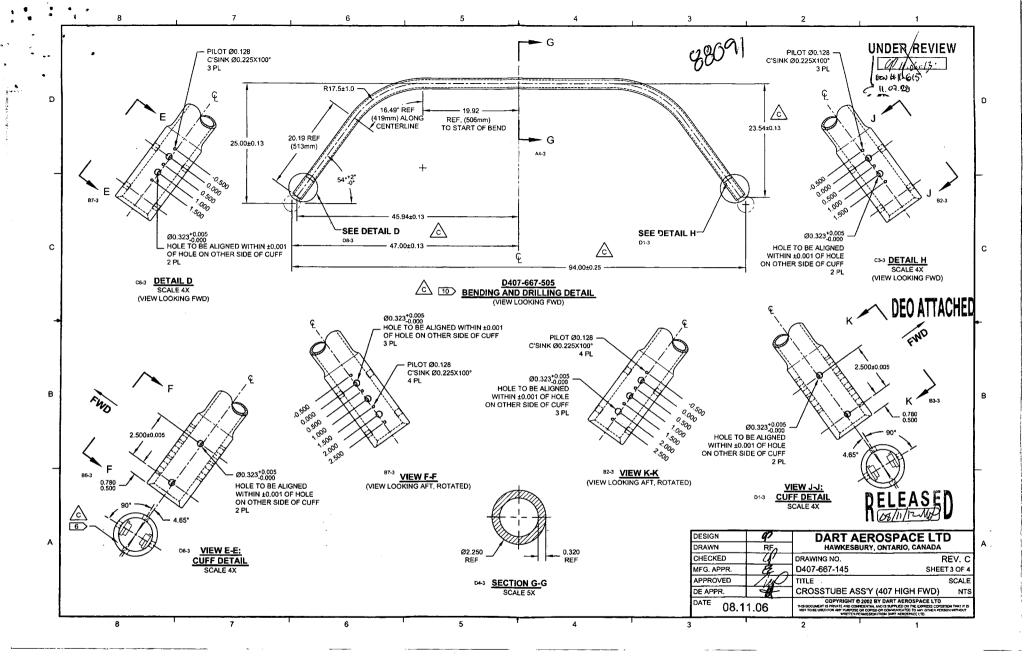
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Wave/Twist in Tube

Folio

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NCR: Y	es / No				WORK ORDER NON-C	CON	VFORI	MANCE / UPDATE		QA Closed:	Date:	
Work Orde					DISPOSITION			AC	SAINST DEF	QA Closed: Date DEPARTMENT/PROCESS Water Jet Prod. Eng. Coor. Rec/Store/Packaging		
Part No					Scrap Machining Sm Use-as-is Thermoforming Fi			osstube nall Fab nishing nposite	Fab Prod. Eng. Coor. Quality hing Rec/Store/Packaging Other			
Root				Descri	ption of work order update		nitial	Action		Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description	1	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling]
Operator								:				
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved		l										
					F.	AUL	T CATE	GORY			***	
Landi	ng Gear				General		-		,			-
	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks Broken/Damaged					Inspect	ion Incomplete		Part Incorred	ct	Weld	
	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Unclea	r 📙	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs Contamination						Mainte	enance		Part Moved		
	Heat Trea	leat Treat Countersink					Mislabe	eled		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

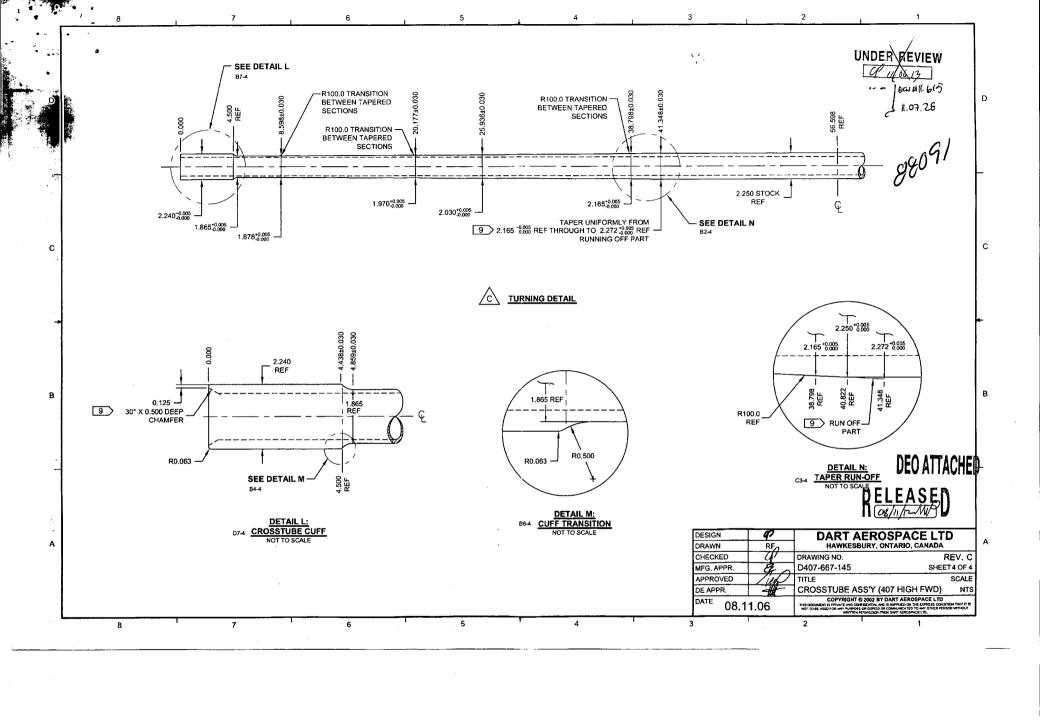
Cut Too Short

Drill Holes

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



NCR: Y	es / No				WORK ORDER NON-CONFORMANCE / UPDATE							
										QA Closed:	Date	<u>. </u>
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N NCR N	0				Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	 Ir	nitial	Act	tion	Sign &		
Cause	Date	Step	Qty	C	or Non-conformance	Chi	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved												
						AUL	T CATE	GORY				
Landin	Bending Centre N Cracks Crushed Cuffs Heat Tre Inspectio Ripples i Torque N	lot Concer /Crimped at on Strip in n Bend Waves in E Sequence	Tube Extrusion	'S	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish		Instruct Mainte Mislabe Misread Offset Out of C	ion Incomplete ions Incomplete/lenance eled d Calibration Sequence	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned \ Power Loss/	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/T	Wave/Twist in Tube Folio						Dimensions				

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DRAWING NO.	TITLE		AEROSPACE LTD	D.E.O. NO.	SHEET NO.	SCALE
D407-667-145	CROSSTUBE ASS'Y (407	HIGH FWD) ENGI	NEERING ORDER	D407-667-145-C-1	SHEET 1 OF 1	NTS
DRAWN 9	CHECKED	MFG. APF	°R. /3	APPROVED	DE APPR.	
DATE 11.07	.15 DATE // .	07.22 DATE	11.07.22	DATE 11/07/22	DATE 11.07.2	1

PURPOSE:

REPLACE MAGNOBOND WITH PROSEAL.

0,8091.

CHANGE:

IS

Item	Qty -145	Part Number	Description
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

WAS:

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

18

- 12) TO INSTALL D2891-1 SUPPORT: ABRADE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT), APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

WAS:

- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.



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	-	-						_			DQA:	Date:	
NCR:	Yes	/ No		•		WORK ORD	ER NON-C	ONFOR	VIANCE / U	PDATE	6		
									\$		QA Closed:	. Date:	<u> </u>
Work Ord	er:	š				DISPOS	ITION			AGAINST DE	PARTMENT	/PROCESS	• • • •
Part I	No.			6.		Work Orde	Rework Scrap Use-as-is r Update	4 .	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering , Quality Other
Root					Descri	ption of work ord	er update 🕺	Initial **	A	Action	Sign &		
Cause		Date	Step	Qty	(or Non-conformar	nce 3	Chief Eng	', De	scription	Date	Verification	 QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		٠			ę.	•	• 4					<u></u> F	
							F	AULT CATE	GORY		<u>-</u> -		
Landi		Gear Bending Centre N Cracks Crushed/ Cuffs Heat Trea	Crimped at	-	O/S	General Bend BOM/Route Broken/Damage Burrs Contamination Countersink Cut Too Short		Instruc	ion Incomplete tions Incompleto enance eled		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Ripples ir	Bend			Drill Holes		Offset	*		–	·	-

Out of Calibration

Out of Sequence Outside Dimensions

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Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

REFERENCE ONLY Small



DART AEROSPACE LTD.

IIN-D206-667 Page 17 of 19

PARTS LIST 5.0

HIGH GEAR CROSSTUBES 5.1

ltem	Qty -101	Qty -201	Qty -103	Qty -203 €	Oty -105	Qty -205	Part Number	Description			
	Х						D206-667-101	CROSSTUBE INSTALLATION,			
								206A/B HIGH FWD			
		Х					D206-667-201	CROSSTUBE INSTALLATION,			
								206A/B HIGH AFT			
			X				D206-667-103	CROSSTUBE INSTALLATION,			
								206L/L-1/L-3/L-4 HIGH FWD			
				X	 		D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT			
					Х		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD			
						Х	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT			
1	1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD			
2		1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT			
3			1				D206-667-143	CROSSTUBE ASSEMBLY,			
								206L/L-1/L-3/L-4 HIGH FWD			
4				1			D206-667-243	CROSSTUBE ASSEMBLY,			
								206L/L-1/L-3/L-4 HIGH AFT			
5					1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD			
6						11	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT			
10	*2	*2	*2		*2		D2891-1	SUPPORT			
11				*2			D2892-1	SUPPORT			
12						*1	D2894-1	SUPPORT			
13	*4	*4	*4		*4		D3595-063-395	RUBBER CUSHION			
14				*4			D3595-063-450	RUBBER CUSHION			
15						*2	D3595-075-430	RUBBER CUSHION			
16	*4	*4	*4	l	*4		MS21920-20	CLAMP			
17				*4		*4	MS21920-22	CLAMP			
18						*2	MS21920-25	CLAMP (OR MS21920-24)			
19	4	4	4		C 4=	===	-AN5-32A	BOLT			
20_				4		4	AN5-34A	BOLT			
21	4	4	4	4	4=	=4=	:MS21042l-5	=NUT=(OR:MS21042=5)>>			
22	8	8	8	8	C 8=	<u>=8</u> =	INAS1149C0563J_	-WASHER (OR AN960JD516)			
23						*2	D3190-1	CHAFING SHIELD			
				ļ							
40	*2		*2	*2	*2	*2	D2873-043	NUT PLATE			
41	*2		*2	*2	*2	*2	D2873-045	NUT PLATE			
42		2					D2872-043	NUT PLATE			
43		2					D2872-045	NUT PLATE			
44	10		10		L		AN5-7A	BOLT			
45		10		10	40-		-AN5=10A	-BOLT>			
46	4	10	4		4-		-AN5-30A	BOLT			
47				4		= 4=	TAN5=32A	-BOL-T			
48			12				AN970-4	WASHER (OPTIONAL)			
49		6					MS21042L5	NUT (OR MS21042-5)			
50	10	12	10	10	<10=	=10=	=NAS1149C0563J=	-WASHER (OR AN960JD516)			
60		1		<u> </u>	I		D3039-3	CENTER DRILL (TOOLING, NOT INSTALLED)			

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/-143/-241/-243 & D407-667-145/-245 ASSEMBLIES ABOVE

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Revision: D

Date: 11.05.01



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LIQUID PENETRANT TEST REPORT

P- 12680

ACUREN							•		
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CLIENT	Dar	1 AEROSI.	ACE_		DATE	1000, J	1,2012 T		AM 🗷 PM 🗅
ATTENTION	AND	1 - CHAN	TAL		ACUREN JOB NO.	18	8-12-co	391	
ADDRESS	1270 AS	BELDEEN	ST		PO/WO No.				
	NAWKES BY	wy on			WORK LOCATION	بمرك	ME.		
					ACCEPTANCE STD	ASTU 141	7/051-0381	REV./DATE	2005
PROJECT		FPI	i, au		2035 Tu	BES			
ITEM(S) EXAMINE)			12	.)				
1120(O) 270 UM									
JOB DESCRIPT	TION	PROCEDURE No.	LT-0002 REV.	/DATE	2008	TECHNIQUE N	O. LT-FOUND F	REV./DATE	2008
PART No.	SE	E CESUL	75S		MATERIAL ALLE	win /	STEEL THICK	NESS _	1 Arion S
1	ET PLOY	NESCENT	DUCI	ار کا دیم	ection	WAS C	CONFLETE	s ow	THE
(2)		War Can	FACE						
TEST DETAILS		Jepic Surc							
METHOD		DRESCENT	☐ VISIBLE		WATER WASH		SOLVENT REMOVA	ABLE	Post Emulsified
FAMILY BRAND		FLUX			BLACK LIGHT S/N	16459	OUTPUT > 1000 μ	W/cm ²	☐ AMBIENT < 2 fc
PENETRANT	2167	MINIMUM DWELL T		Min.	LIGHTING EQUIP.	☐ FLASHLIGHT	TROUBLELIGHT	OUTP	UT>100 fc @ SURFACE
PENETRANT REM	OVER HOO	MINIMUM DRY TIME		Min.		2418A	200	CAL DUE	DATE NOU (2
DEVELOPER TYPE	SAD SOL	MINIMUM DWELL T		Min. ✓	LIGHT METER S/N	10000	30V	CAL DOE	200
DEVELOPER TYPE TEST SURFAC		JEOOS LA AGOEOOS				•			
SURFACE CONDIT			S WELDED		MACHINED	☐ SHOT B			LEAN BARE METAL
	RATURE 🔲 < - 4°C/	20°F □ -	4°C/ 20°F to 1	0°C/50°	F	⊿ 10°C/50	0°F то 52°C/125°F	<u> </u>	52°C/125°F
RESULTS-	(METRIC	(IMPERIAL)		 .			 		
ITEM	COM	IMENTS	ACCEPT	REJECT		سر دوره کاهمورستان پیکانگر			
CE	OSS TUBE	Wood					\times	><	
A	down new					(><)	\times	$\leq \geq \leq$	
1_ "	7	208091					×^><^>		
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14	02335		1./						
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1-1-	07730	•		ļ			\times	$\leq \geq$	
				-					
Scope of Services The agreement of Acure	n Group Inc. to perform serv	ices extends only to those servi	ces provided for in wr	iting. Unde	r no circumstances shall su	ich services extend b	peyond the performance of the	e requested se	ervices. It is expressly understo ded nor can they be construed a and use decisions as a result of
	and a decision Consum Inc. in	- of accuming any recognishilit	ies of the owner/onero	itor and ine	ownerionerator retains con	MDIELE FESDORISIONNY	for the engineering, manage	icture, repair	and use decisions as a result of
		Inc. In no event shall Acuren						ur locality. No	o other warranty, expressed or
	ces provided, Acuren Group I nded by Acuren Group Inc.	nc. uses the degree, care and sk	kill ordinarily exercise	d under sim	liar circumstances by other	rs perjorming such s	ervices in the same or since	7 10cumy. 1.c	
SIGNATURES	1	Λ_							
CLIENT REPRES	SENTATIVE 4	LA PO					DTR#	E-	120254
		PRINT			SIGNATURE		REPORT		
TECHNICIAN (SIG	GNATURE):	1 01 -	 -				REVIEWED BY:		
NAME (PRINT):	Mik	CE IHUS	<u></u>				N	AME	INITIALS
\	CGSBI	SNT L	EVEL (CGSB LE	2 ND TECHNICIAN VEL SNT	LEVEL			
		REG. NO		CGSB R					